Unit 2 – Creating Systems To Manage Information

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Part A – Databases, Queries and Reports

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A4 - Testing

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Learning Objectives

To be able to explain the different types of test data.

To be able to explain the different parts of a test plan.

To understand how to carry out testing on a database.

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What Software Are We Using?

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Using Microsoft™ Access.

The software you are using in this exam is Microsoft™ Access.

It is one of the most popular desktop RDBMS programs in the world.

It is very good for small businesses and smaller offices.

It is not very good for large databases or web-based applications.

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Using Microsoft™ Access.

- Your Unit 2 Exam is a ***Practical Exam***.
- You will be expected to be able to use the Using Microsoft™ Access software.
- You will be expected to be able to create Tables, Queries, Reports and Forms.
- You will need this software downloaded at school and at home.

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Downloading Microsoft™ Access.

- Microsoft™ Access is free as part of the Office 365 suite of programs.
- Unlike Word and Excel, you ***cannot open it in a browser!***
- You must download and install it onto your computer.
- You will need to check to see where you are creating the database files.

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What is Testing?

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What is Testing?

Testing is when you see if your database works or not.

This is when you see if the field validation and error messages work.

To do this, you will need to ***select and use test data***.

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Exam Tip – Always Do Your Testing!

- There are ***6 marks*** going for testing in Part A.
- There are ***6 marks*** going for testing in Part B.
- ***That is 12 marks in total.***
- ***In 2022, a Pass Grade was only 14 marks***.
- That means you can almost ***pass this unit just by doing your testing properly!***

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Exam Tip – Always Do Your Testing!

Your database does not have to be working properly to test it.

You will be told what tests to carry out.

You need to record your test data and test results only.

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Exam Tip – Always Do Your Testing!

It is <u>absolutely fine</u> if your database does not work.

You only need to suggest what you would do to fix it.

You can still score lots of marks for testing!

If things go wrong, ***you can do well with a good set of tests!***

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What is Test Data?

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Test Data

This is data that you are going to enter into your database to see if it works.

You may need data that you ***know is going to work***.

You will need data that you know is NOT going to work.

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Using Test Data

If the database works as expected with the normal test data, your program has ***passed the test***.

If the database doesn't work as expected with the normal test data, the database has ***failed that test***.

If the database accepts data that it should have rejected, the database has ***failed the test***.

Selection and choice of test data is therefore very important.

Test data should ***make sure the database does what is expected***!

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Structure Testing in Part A

- Testing your database will involve testing the ***Database Structure – the validation and the relationships***.
- This could be making sure you can only enter data of the right type.
- It could be making sure you only enter data of a certain value.
- It could be making sure you have your lookups set correctly.
- ***It will not involve testing your normalisation, your queries or your reports***.

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Structure Testing In Part A

You will be told exactly what you need to test.

There will be 6 things you need to test.

That means you need 6 rows in your test plan.

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Types Of Test

- The first thing you need to do is work out what type of test you are carrying out.
- There are three kinds of tests, and they are represented by a single letter.
- ***Normal (N).***
- ***Erroneous (R).***
- ***Extreme (X).***
- You will need to identify the type of test you are carrying out.

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Normal Test (N)

Normal Test	
Definition	This is using typical input data that is expected to work with the database and the data will save successfully.
Database Example:	You have a field in a database that expects a whole number between 7 and 12.

Test Data	Reason for Use	Result
7	This is a whole number between 5 and 12.	Data entered successfully
9	This is a whole number between 5 and 12.	Data entered successfully

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Further Reading

Websites

https://www.tutorialspoint.com/database_testing/database_testing_types.htm

Videos

Textbook: pp140 – 142, 166

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This is a sample resource.

The full version contains 56 slides.

The full version is available on purchase of the resource from www.thecomputingtutor.com

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